The Chiropractic Report

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Professional Notes

Disability from Back Pain – First and Growing

You will likely have heard of the 2010 Global Burden of Disease Study (GBD 2010), published as several papers in *The Lancet* in December 2012. This was a long-awaited, five-year study from a consortium of seven highly respected institutions:

a) Harvard University

b) Institute for Health Metrics and Evaluation, University of Washington, Seattle

c) Johns Hopkins University

d) University of Queensland, Australia

e) Imperial College, London

f) University of Tokyo

g) World Health Organization

A core team, led by Dr Christopher Murray and assisted by numerous experts worldwide, provided what is now the best evidence on the burden of disease in 188 individual countries and globally throughout the world. All of this was funded by the Bill and Melinda Gates Foundation. The study's particular sig-

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Reflections on Palmer Homecoming 2015

Changing Perceptions: Challenging a Profession

PALMER COLLEGE OF CHIROpractic, with its main campus in Davenport, Iowa and other campuses in San Jose, California and Port Orange, Florida, is also known as the Fountainhead of the chiropractic profession.

Founded by DD Palmer in 1897, it was the first school of chiropractic and has a storied history. It has used its history and traditions to maintain the unity and support of its numerous alumni practicing throughout the world.

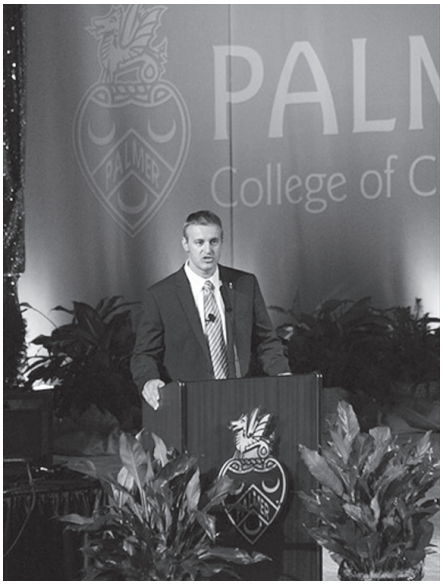
2. In these circumstances it is noteworthy, and will be surprising to some, that the theme and title of Palmer's 2015 Homecoming Convention held in Davenport from August 13-15 was *Changing Perceptions: Challenging a Profession.* And this was no mere title or marketing concept. Palmer College delivered on challenge and change. For example:

• There was the first public presentation of a large new nationally representative Gallup poll commissioned by Palmer College. This reported that an estimated 33.6 million or 13.7% of American adults consulted a chiropractor in the past year, mainly for neck and back pain. The majority of the 5,450 individuals surveyed agreed that chiropractic care was effective for these conditions. The first health professional that all polled would consult for neck or back pain was a medical doctor (54%), a chiropractor (29%), a registered massage therapist (7%), or a physical therapist (6%).

• Celebrations of the 20th anniversary of the Palmer Center for Chiropractic Research (PCCR) were led by presentations from William Meeker DC, MPH, President, San Jose Campus and Christine Goertz DC, PhD, Vice-Chancellor for Research and Health Policy. When the PCCR was established in 1995 there had been no federal funding for research for Palmer College or the chiropractic profession. Since, it was explained, there had been funding of more than $35 million to the college. The PCCR was now the largest and most productive chiropractic research center in the world with basic science and clinical science facilities on three campuses, researchers from many disciplines, and 395 scientific publications to date. In other words, this is a changed Palmer College.

When he was a chiropractic student in the late 70s, said Dr Meeker, research data "just didn't exist". Dr Goertz discussed current studies in a number of clinical areas, but concluded that "back pain is the number one cause of disability worldwide, and prescription drug abuse has reached epidemic proportions. We have a moral imperative to improve healthcare systems through chiropractic research."

• A moving example of this came from the keynote presentation at the Alumni Luncheon. This was given not by the usual chiropractic or motivational



Palmer Chancellor Dr Dennis Marchiori

speaker but from the prominent medical researcher William Weeks MD, PhD, MBA (*left*), Professor of Psychiatry and of Community and Family Medicine at the Geisel School of Medicine at the University of Dartmouth. Dr Weeks spoke of his sister, a lawyer and competitive equestrian athlete who was thrown from a horse injuring her back 16 years ago. After many difficult months she subsequently died from complications resulting from opioid medications prescribed for her back pain. "There's got to be a better way", said Dr Weeks and "patients need to be able to make informed choices about their healthcare."

Dr Weeks is now also serving as Chair, Clinical and Health Services Research at PCCR. In work that complements new directions at Palmer College and the findings of the Gallup poll, his focus is on efforts to understand how doctors of chiropractic supply healthcare services, how patients use such services, and how best to integrate services with other healthcare providers.

• Other keynote presentations were from Palmer Chancellor Dennis Marchiori DC, PhD (on public perceptions of the profession and the challenges they provide), David Chapman-Smith, former Secretary-General, World Federation of Chiropractic (titled *Does the Chiropractic Profession Need an Adjustment?*), George McAndrews JD (comparing medical attitudes to chiropractic now and then) and Louis Sportelli DC, President, NCMIC Foundation (on leadership lessons).

3. This issue of *The Chiropractic Report* focuses on three matters – the new Gallup poll and how its results compare with other public surveys; how consistent these surveys are with the profession's now chosen and established core market identity positioning chiropractors as the primary care professionals or experts for spinal health and well-being; and one of the main messages given by Mr. Chapman-Smith, editor of this Report, in his lecture – the top ten cumulative reasons why there is an overwhelming case for the chiropractic profession to place its main focus on spinal health – from the points of view of patients, the profession, and the public interest.

(From left) *David Chapman-Smith, Dr Dennis Marchiori, George McAndrews*

B. Gallup-Palmer Poll and Other Public Surveys

4. Results of the poll, officially titled *The Gallup-Palmer College of Chiropractic Inaugural Report: Americans' Perceptions of Chiropractic,* were given by Gallup researcher Cynthia English. The full report is now available at the Palmer College website www.palmer.edu, as is a scientific paper on it just published online by the Journal of Manipulative and Physiological Therapeutics (JMPT).[1] Results include:

• In rounded figures 14% of American adults consulted a chiropractor in the past year, another 12% within the past 5 years, and another 25% lifetime. Accordingly, at present 51% of American adults have had chiropractic care.

• The average number of visits for those seeing their chiropractor in the past year was 11.

• For users in the past 5 years, the majority consulted a chiropractor for back and neck pain, but an overwhelming majority (90%) would not think of consulting a chiropractor for general health reasons.

• For all 5,450 sampled, the majority agreed that chiropractic care was effective for neck and back pain. The health professional they would first consult for these conditions was a medical doctor (54%), a chiropractor (29%), a registered massage therapist (7%) or a physical therapist (6%). How many of them would consult a chiropractor for neck or back pain? 57% described themselves as expected (35%) or likely (22%) users of chiropractic, whereas 42% described themselves as unlikely (24%) or highly unlikely (18%) users. Main areas of lack of knowledge and uncertainty influencing decisions on whether or not to consult a chiropractor were cost (including difficulty in discovering in advance what likely cost would be – one interesting finding was that 2 of 3 (65%) of those not using chiropractic services did not know whether their health insurance covered these services), potential danger and level of chiropractic education/training.

"The goal of this groundbreaking three-year project is to get an objective understanding of why Americans choose or don't choose to see a doctor of chiropractic," said Palmer College of Chiropractic Chancellor Dennis Marchiori, DC, PhD. "For years, we've heard from other sources that about 8 percent of Americans seek chiropractic care each year. Gallup found that number to be 14 percent. That's great news, but the number is still too low. This project will help the profession learn what barriers exist and then take steps to remove them."

5. While the focus on spinal pain and disability does not reflect the full scope of chiropractic principles and practice,

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and may be uncomfortable for some chiropractors, it does reflect the public's view of the profession as now shown in numerous surveys in the USA and internationally. These studies show that the great majority of patients consult chiropractors for pain from neuromusculoskeletal (NMS) problems, principally back and neck problems, headaches and extremity joint problems. Surveys in diverse countries such as Australia, Canada, Denmark, Italy, the Netherlands, and the USA report that only 1-5% of chiropractic patients present with non-neuromusculoskeletal (non-NMS) problems. For example:

a) **Australia.** In Australia a 1990 telephone survey of a random sample of 310 members of the public commissioned by the state government's health department in Western Australia revealed that:

• 8% had visited a chiropractor during the past 12 months, 32% at some time in the past.

• Both patients and non-patients felt that the management of back pain was the one area in which chiropractors were better trained and more effective than medical doctors. Most who had not visited a chiropractor said they were prepared to do so. When asked what for, most common responses were back, neck, spine (60%), joints (24%), muscular pain (20%) and headaches (7%). Only 4% would visit a chiropractor "to maintain good health". No non-NMS conditions rated over 1%.

• Of the 30% (n 104) who had visited a chiropractor, common reasons were back problems (61%), neck problems (23%), headache (7%), extremity problems (11.5%). The highest non-NMS reason was breathing/asthma (2%) and only one person (1%) gave the reason for his/her visit as health maintenance.

• Approximately 3 out of 4 of all respondents interviewed agreed that chiropractic had an important place in the total health care system (72%) and that chiropractic services should be available in hospitals (71%) and an overwhelming majority (89%) agreed that chiropractic services should be covered by the government health plan, Medicare.

• Asked if chiropractors should diagnose general health conditions in a similar way to general medical practitioners, an overwhelming majority of 92% disagreed (79%) or said they did not know (13%).[2]

b) **Canada.** The provinces of Alberta and British Columbia in Western Canada have the highest recorded utilization of chiropractic services worldwide at approximately 20-25% of adults annually. In a September 1999 telephone survey of public attitudes by Criterion Research, commissioned by the College of Chiropractors of Alberta, the profession's licensing body in that province:

• In a random sample of 400 adults, 204 (51%) were current or past users of chiropractic services and 20% had visited a chiropractor during the past year. Asked the reason why they sought chiropractic treatment users listed a variety of neuromusculoskeletal (NMS) pain syndromes including headaches/migraines. Asked the circumstances in which they would consider using chiropractic services, non-users cited NMS pain syndromes exclusively.

• The great majority of users and non-users (80%) agreed that they only visit a health care provider "when they have pain or symptoms." Furthermore, although 91% agreed that they participate in health promoting activities, a large majority (69%) actively disagreed that they would go to a health provider to optimize their health.[3]

Why did Palmer College take the expensive decision to commission an ongoing series of Gallup polls, of which this is the first, to learn more about public opinions of the chiropractic profession? Because this was a logical extension of its earlier consultation with the public and the profession to establish an appropriate and recommended market identity for the profession. We now turn to consider this.

C. Market Identity and the Case for Spinal Health

6. Twenty years ago Caplan and associates, marketing consultants who had performed public opinion surveys and held focus groups for the Canadian Chiropractic Association, warned in their report: "It is essential to establish a single and unequivocal identity for chiropractic in the minds of the public as soon as possible."[4] They had found deep problems of lack of knowledge, misinformation, and confusion arising from the various identities given by different groups within the profession. This was seriously limiting the future growth and success of the profession. The public/market does not use a service or product it doesn't understand.

In the USA in 1998 the Institute for Alternative Futures, consultants to NCMIC Insurance on the future of the profession, warned that "without a clear and agreed upon role the profession will decline and suffer greatly in the near future because of new competitive pressures."[5] In 2002, in an article widely read and quoted ever since, Meeker and Haldeman acknowledged: "The profession has not resolved questions of professional and social identity . . . chiropractic stands at the crossroads of mainstream and alternative medicine."[6]

These and other warnings led to two broad international consultations on market identity, the first by the World Federation of Chiropractic (WFC) and the second by Palmer College. Both placed spinal health, health through management of the spine and its related tissues, at the core of the profession's market identity. Actual language was:

• World Federation of Chiropractic: The spinal health care experts in the healthcare system.

• Palmer College: The primary care professional for spinal health and wellbeing.

In both cases these statements had important supporting concepts or pillars which included evidence-based practice and inter-professional cooperation and collaboration.

Perhaps it is not a surprise that minority voices in the profession have challenged these identities, suggesting a range of others including:

• Contemporary vitalism with a primary focus on the nervous system. (Good luck with the public with that. It involves principles of great interest to the profession, but no public survey or independent pollster in the world will be found to encourage or support such a market identity for the profession.)

• Conservative general primary care. (This is a route that osteopathy took in the United States in the 1960s and that chiropractic might have taken, but is not an identity for the profession that is understood by the public or is well-supported by chiropractic education or scope of practice laws generally).

• Primary care experts for musculoskeletal disorders. (Significant problems with this are that it does not give the profession

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nificance for the chiropractic profession may be summarized as follows:

a) GBD 2010 is seen as the basis for health and healthcare priorities at the national and international level.

b) It reported that a majority and steadily increasing percentage of disability everywhere was coming from people's lifestyles and non-communicable disorders (NCDs) rather than communicable diseases.

c) It found that back pain was the leading cause and neck pain the fourth-ranked cause worldwide of years lived with disability (YLDs). Migraine was seventh, falls were ninth. (Leading causes of disability in order were low-back pain, major depressive disorder, iron-deficiency anemia, neck pain, chronic obstructive pulmonary disease, anxiety disorders, migraine, diabetes and falls.)

The Lancet has now published the Global Burden of Disease Study 2013 (GBD 2013), updated information from Vos et al., part of the original core expert team. This confirms that low-back pain remains the leading cause of disability and YLDs worldwide. It led to significant publicity in national newspapers when published online on June 8. In The Australian, in an article titled *Illness Study a 'Call to Arms',* John Ross notes:

a) The GBD 2013 study published in The Lancet "has found that premature death rates are in decline… but the death toll has been replaced by a colossal disability burden…"

b) Worldwide data on "the illness toll from 301 acute and chronic diseases" show that "the predominant illness had changed little in almost a quarter of a century with low-back pain, depression, anemia, neck pain and hearing loss leading the list."

c) ". . . lifestyle and age-related conditions are exerting a greater toll" with "startling increases in health loss from diabetes, Alzheimer's disease, osteoarthritis and chronic headache triggered by misuse of medication."

An Australian co-author of GBD 2013, Johnathan Carapetis of the Telethon Kids Institute in Perth, is quoted as saying that the study was "a call to arms for policy makers to put more priority on keeping older people active, diagnosing and treating diseases more quickly and finding new ways of reducing suffering." "These are the sorts of data that need to be considered when we figure out how to spend extra dollars on medical research."

In the UK Fiona Macrae, Science Editor writing for the *Daily Mail* under the title *Back Pain is the Biggest Cause of Ill Health in the World; Issues Cause more 'Years Lived with Disability' than any other Condition* notes:

a) "An analysis of the health of 188 countries found lower back aches cause more years lived in pain than anything else."

b) "Neck pain is also a major cause of ill health, in second place after back pain in England and Scotland, and third place in Northern Ireland and Wales."

c) "Backache is starting to bite much earlier, with almost half of under-30s in pain. Time spent on chairs and sofas while hunched over mobile phones and tablet computers are blamed for children as young as 12 seeking treatment."

d) "Depression and back pain were among the top ten causes of disabling but non-fatal illness in every country."

e) "An estimated 1.6 billion people-almost a quarter of the world's population – suffer tension headaches and 850 million are afflicted by migraines."

(Vos T et al. GBD Study 2013 Collaborators (2015) *Global, Regional, and National Incidence, Prevalence, and Years lived with Disability for 301 Acute and Chronic Diseases and Injuries in 188 Countries, 1990-2013: A Systematic Analysis for the Global Burden of Disease Study 2013.* Lancet Online; published online June 8, 2015 http://dx.doi.org/10.1016/S0140-6736(15)60692-4.)

Other Research

UK and Canada – Manipulation Effective for Sciatica

Past systematic reviews of the randomized controlled trials (RCTs) evaluating the effectiveness of different treatments for sciatica have reported on the effectiveness of individual treatments – but have not directly compared them. Therefore the importance of this new evidence review in The Spine Journal from Lewis, Williams et al. in the UK and funded by the UK National Institute for Health Research – for the first time it does compare treatments.

Using a study design called network meta-analysis it reports:

a) Using overall recovery as the outcome, compared with either conventional general practitioner care or no care, "there was a statistically significant improvement following disc surgery, epidural injections, non-opioid analgesia, manipulation and acupuncture."

b) For pain as the outcome "Opioids, education/advice alone, bed rest, and percutaneous discectomy were inferior to most other treatment strategies".

c) Lewis, Williams et al. conclude: "For the first time, many different treatment strategies for sciatica have been compared in the same systematic review and meta-analysis. This approach has provided new data to assist shared decision-making.

The findings support the effectiveness of non-opioid medication, epidural injections, and disc surgery. They also suggest that spinal manipulation, acupuncture and experimental treatments, such as anti-inflammatory biological agents, may be considered. The findings do not provide support for the effectiveness of opioid analgesia, bed rest, exercise therapy, education/advice (when used alone), percutaneous discectomy, or traction. The issue of how best to estimate the effectiveness of treatment approaches according to their order within a sequential treatment pathway remains an important challenge".

The prominent British osteopathic researcher Kim Burton PhD, DO is one of the authors. Manipulation is described as chiropractic or osteopathic, and the only two individual RCTs of manipulation referenced are osteopathic (Burton, Tillotson et al. (2000) – comparing chemonucleolsis and manipulation) and chiropractic (Santilli, Beghi et al. (2006) – comparing active and

simulated chiropractic manipulation). Other trials will appear in systematic reviews mentioned.

For example there is no reference to the positive RCT of chiropractic manipulation by McMorland, Suter et al., an interdisciplinary team of chiropractor and neurosurgeons from the University of Calgary Spine Program and Neurosurgery Department in Calgary, Alberta, Canada, published in JMPT in 2010. In a population of 40 patients with lumbar disc herniation (LDH) with at least three months failed conservative medical care (analgesics, life style modification, physiotherapy, massage therapy and/or acupuncture) , patients improved with chiropractic spinal manipulation to a similar degree as with surgery/microdiskectomy. Given the higher cost and risks of surgery the authors conclude "patients with symptomatic LDH failing medical management . . . should consider chiropractic spinal manipulative treatment as a primary treatment, followed by surgery if unsuccessful".

(Lewis R, Williams N et al. (2015) *Comparative Clinical Effectiveness of Management Strategies for Sciatica: Systematic Review and Network Meta-Analysis* Spine J 15:1461-1477)

(McMorland G, Suter E, Casha S et al. (2010) *Manipulation or Microdiskectomy for Sciatica? A Prospective Randomized Clinical Study* J Manipulative Physiol Ther (33) 8:576-584.)

World Notes

Turkey Commences Chiropractic Education

This month Turkey has become the 17th country to introduce formal chiropractic education, with students commencing their education within the faculty of health sciences at Bahcesehir University in Istanbul. This is the first school of chiropractic in the Eastern Mediterranean and Middle East regions.

Congratulations are due to the Turkish Chiropractic Association and its president and past president, respectively Drs Aurelie Belsot and Mustafa Agaoglu, for this achievement. They are also due to the profession internationally, since there has been strong support from the World Federation of Chiropractic (WFC), the European Chiropractors' Union (ECU) and the Eastern Mediterranean and Middle East Chiropractic Federation (EMMECF), all of which were represented at the opening ceremony on September 4.

The new program is modeled on the program introduced in Brazil in the 1990s, where there were fewer than 20 chiropractors at the time but there are now over 1,000, with the great majority graduating from two now well-established, university-based programs in Novo Hamburgo and Sao Paulo. First students in Turkey are 22 health science graduates, physiatrists and physical therapists chosen from almost 100 applicants, who will complete a 2-year, second-degree program. Subsequently this will become a 5 year program for those studying chiropractic as their first choice. Chiropractic Coordinator is Dr Agaoglu, overall Coordinator is Professor Hasan Kerem Alptekin MD, Assistant Dean of the Health Sciences Institute at Bahcesehir University.

Other countries with schools of chiropractic are Australia (4), Brazil (2), Canada (2), Chile, Denmark, France, Japan, Malaysia, Mexico (3), New Zealand, South Africa (2), South Korea, Spain (2), Sweden, Switzerland, the UK (3) and the USA (15). See full contact details at www.wfc.org under About Chiropractic. Presently there are 41 recognized programs in 17 countries. Countries with advanced plans for commencing schools include Argentina, China – Hong Kong, Georgia, Hong Kong, Italy, Kenya and Norway.

*Dr Aurelie Belsot, TCA President (*right*) and Program Coordinator Dr Alptekin at the opening ceremony, and (*below*) seen with (*from left*) Dr Oystein Ogre, ECU President, Dr Agaoglu, Assistant Coordinator, Chiropractic Program, Dr Stathis Papadopoulos, WFC Past President and EMMECF President, and other TCA members.*

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ropractic Care: Results of a Population-Based Case-Control and Case-Crossover Study. Spine 33(4S):S176-183.

12 Kosloff T, Elton D et al. (2015) *Chiropractic Care and the Risk of Vertebrobasilar Stroke: Results of a Case-Control Study in U.S. Commercial and Medicare Advantage Populations.* Chiropractic and Manual Therapies; 23:19.

13 See past issues of this Report online at www.chiropracticreport.com for reviews of the evidence.

14 United Kingdom Back Pain Exercise and Manipulation (UK BEAM) Trial Team (2004) *Cost-Effectiveness of Physical Treatments for Back Pain in Primary Care*, Br Med J; 329:1381.

15 Gaumer G (2006) *Factors Associated with Patient Satisfaction with Chiropractic Care: Survey and Review of the Literature*, J Manipulative Physiol Ther 29:455-462.

16 Carey TS, Garrett J at al. (1995) *The Outcomes and Costs of Care for Acute Low-Back Pain among Patients Seen by Primary Care Practitioners, Chiropractors, and Orthopedic Surgeons* N Engl J Med 333:913-917.

17 Busse J, Riva J et al. (2013) *Surgeon Attitudes Toward Nonphysician Screening of Low-Back or Low Back-Related Leg Pain Patients Referred for Surgical Assessment* Spine 38:7 E402-E408.

an identity distinct from several other health professions and specialties, and is less recognized by and clear to the public. In one way it is wider in scope than spinal health, including extremities for example. In another way it is more narrow, focusing on MSK disorders rather than including their impact on non-MSK disorders and general health. The WFC and Palmer College identities of spinal health and wellness have that wider focus.)

• Neuromusculoskeletal disorders. (A better description of the core focus of chiropractic education and practice, but far too opaque for a market identity and public understanding.)

The spinal health identity, however, has very broad support in the profession. Both the WFC and Palmer College studies included consultation with thousands of grassroots chiropractors internationally and representatives of the public. There was unanimous acceptance of the recommended market identity by the WFC national member associations at the 2005 WFC Assembly held in Sydney, Australia, and by the Palmer Board.

7. **Ten Reasons.** Based on Chapman-Smith's keynote address at the Palmer Homecoming titled *Does the Chiropractic Profession need an Adjustment,* here are 10 reasons, compelling when taken together, for the chiropractic profession to stake its future on spinal health.

8. **One. Size of the Marketplace.** Back and neck pain are the first and fourth leading causes of disability worldwide. That has been confirmed in the 2010 and 2013 Global Burden of Disease (GBD) studies published in The Lancet.[7,8] They affect people in all walks of life, whether sedentary or active. Spinal pain is rising in children, because of lifestyles, and seniors, because of the ageing population. Anxiety, commonly associated with chronic spinal pain, migraine headaches and falls are also amongst the top 10 causes of disability. In pure market terms spinal health is a vast and attractive area in which to be supplying healthcare services.

(See the Professional Notes for more on GBD 2010 and 2013, the latter just published in June. In some countries, for example England and Scotland, back and neck pain are actually the first and second most common cause of disability.)

9. **Two. Public Acceptance of Expertise**. As the studies already mentioned show, the public understands and agrees that chiropractors have expertise in the management of spinal disorders. Accordingly, there is not only a huge market need, but also the public identifies the chiropractic profession with answering that need.

10. **Three. Acceptance – Other Stakeholders**. Prior to the 1990s the public had already accepted the chiropractic model of management of spinal problems, based on chiropractic adjustment, remaining active, exercises, patient education and encouragement, and avoidance of bedrest and prescription medication and surgery where possible. This was in conflict, however, with the medical model at that time.

Since the mid-1990s and the first government-sponsored, national, evidence-based guidelines in the UK and the USA then published, there has been continuing erosion of that conflict. Whereas the medical profession was once implacably opposed to spinal manipulation for back pain whether by chiropractors or anyone else, there has been a complete reversal and, for example, current guidelines from the American College of Physicians recommend it for most patients with acute or chronic back pain.[9] Similar guidelines in many other countries and regions, such as Europe, do the same.

The much quoted and respected 2008 report of the Bone and Joint Decade Task Force on Neck Pain and its Associated Disorders, representing international experts from all relevant professions, has made similar recommendations for the management of patients with neck pain and cervicogenic headache.[10]

The result is that in 2015 there is no longer any significant conflict between the chiropractic and medical professions on the evidence-based model of management of patients with neck and back pain. As with the public, both health professionals and third party payers – the other major stakeholders in healthcare – are positioned to support rather than resist a role for chiropractors as spinal health experts.

11. **Four. Sound Evidence of Safety and Effectiveness.** Unlike former times, when the profession claims expertise in spinal health it now has sound evidence to support that claim. On safety:

a) At a time when addiction to opioids and other medications prescribed for pain relief is a growing problem constantly discussed in the media, a major attraction of chiropractic care is its safety as a non-pharmacological, non-surgical option and approach to treatment.

b) Recent evidence has at last put the one perceived serious risk of chiropractic management, vertebrobasilar artery dissection (VAD) from cervical adjustment, in perspective. Any association of VAD with chiropractic manipulation is extremely rare with a generally accepted incidence of 1 in 1 million treatments. The Canadian study by Cassidy, Boyle et al.[11], the first to compare the risk of stroke in the general community with not only chiropractic but also medical patients, found the same slightly increased risk with both professions. Cassidy, Boyle et al. concluded that this was likely explained by some patients consulting a chiropractor or medical doctor for neck pain from a VAD and stroke in progress. In other words stroke was a associated in time with chiropractic and medical care – but not caused by it.

Importantly, a new large independent study from the USA, using the same case control design as Cassidy, Boyle et al., supports this conclusion. This is from Kosloff, Elton et al.[12], researchers from the managed care organization United Health Group in Minnesota, and is just published and available free online in Chiropractic and Manual Therapies. It uses a database with approximately 39 million members, and concludes there was no excess risk of VBA stroke associated with chiropractic care compared to primary care."

On effectiveness, a number of good quality randomized controlled trials and systematic reviews in the past 10 years have strengthened the evidence that chiropractic care, with exercises added to spinal manipulation for sub-acute and chronic pain patients, is more effective than usual medical care, various other treatments, and no treatment for patients with back pain, neck pain and spine-related headache.[13]

12. **Five. Value – Cost-Effectiveness and Patient Satisfaction**. Today those who pay for healthcare are increasingly focused upon *value* of services rather than the exact qualification of the healthcare professional providing them. Care given must be safe and effective – but chief additional measures of value are cost-effectiveness and patient satisfaction. Here again the chiropractic profession now has sound evidence.

With respect to cost-effectiveness, the superiority of chiropractic care over medical care has been well documented since the Manga Report in Canada in 1993. Cost-effectiveness has been demonstrated in usual and managed care settings, with chiropractic having lower direct (cost of care) and indirect (e.g. cost of time off work/compensation and medical complications) expense. The BEAM trial in the UK reported potential for huge savings if all patients with common mechanical back pain were offered skilled manipulation as part of the first line approach to management.[14]

With respect to patient satisfaction, studies have consistently shown that patients with spinal pain have higher satisfaction rates with chiropractic care than treatment from many other health providers. In the words of Gary Gaumer PhD, an independent health services researcher from the Department of Health Care Administration, Simmons College, Boston, reporting his American national survey in 2006, "this is remarkable given the fact that much of the financial burden of the care is borne by patients, and that the preponderance of care is for the difficult chronic problems of (the) back and neck."[15]

(For a full analysis of the evidence and the reasons for such satisfaction see the January 2007 issue of *The Chiropractic Report*.)

This is the Holy Grail for those who pay for and seek *value* in healthcare – an effective treatment approach that combines cost-effectiveness with high patient satisfaction.

13. **Six. Medical Profession – Uncompetitive and Uninterested**. We have established that there is a vast healthcare market available in spinal healthcare which chiropractors are well-qualified to serve. Next, the biggest potential competitor, the medical profession, is not well-placed to compete, and with respect to most patients, those deemed to have common non-specific back and neck pain without red flags, is generally uninterested at the primary care level in trying to compete. Issues here include:

- Lack of training. Many studies confirm that medical students have minimal training and competence in the management of common musculoskeletal pain and disability. What hours are given to the musculoskeletal system in undergraduate training focus on red flags such disc herniation, bone fracture and disease, not the assessment and management of the more than 90% of spine pain patients without red flags.
- Lack of effective or evidence-based care in primary practice. Family and general medical practitioners have few options other than to refer. Traditionally there has been reliance upon bedrest and wait-and-see plus medication, now known to promote disability and complications and to be inappropriate. There is over referral for imaging and other expensive diagnostic testing, and over reliance on surgery if any structural abnormalities found.
- In the absence of structural pathology patient complaints of continuing and chronic pain are often deemed to have a psychological basis which the physician has neither the time nor skills nor inclination to manage.
- At the level of the surgical or medical specialist there is much highly skilled management of patients with red flags, especially in this new era of microsurgery where discs can be replaced through small incisions and without disrupting any of the soft tissues supporting the spine. Patients can be walking within hours of their operations. However relatively few patients require this invasive care. Widely varying surgical rates within the same country show that many patients receive surgical care unnecessarily and there is now much evidence that this is inappropriate, frequently harmful, and very expensive.

14. **Seven. Difficulty for Others to Acquire Manipulative Skills.** Another important factor in assessing the market for spinal healthcare is the difficulty others face in trying to achieve the clinical and patient skills found in chiropractic education and practice. A medical doctor has little difficulty acquiring postgraduate skills in acupuncture (more needles) or naturopathy (more substances to prescribe), but has a major challenge in trying to gain qualifications and skill in the totally foreign field of spinal manipulation.

That was made clear in the very interesting North Carolina Back Pain Project trial by Carey et al. published in 1995.[16] On the understanding that spinal manipulation was of established value for patients with back pain but that American physicians were then reluctant to refer patients to doctors of chiropractic, this trial compared patient results following treatment by chiropractors or by medical doctors given 100 hours instruction in spinal manipulation. The chiropractic patients had significantly superior results, and the major consequence of the trial was that participating medical doctors subsequently increased their referral of patients for chiropractic care.

The one other profession that has made a concerted move to develop manual therapy skills internationally is the physical therapy (USA) or physiotherapy (elsewhere) profession. But whereas all chiropractic students have a primary focus on the development of manual assessment and manipulative skills, which is the hallmark of chiropractic care, a thorough training in such skills is only available to those PT students who progress to postgraduate specialty training in orthopedic or manipulative masters degrees.

15. **Eight. Ready Access and Early Return to Activity**. Yet another reason that the chiropractic profession is well-placed to assume a greater role in spinal healthcare is ease of access for patients. Early access to care is understood to be important for patients with spinal pain and disability, providing quicker return to activities of daily living and avoiding complications and chronicity. With chiropractic care there are these advantages:

- *Direct Patient Access.* By training and legal scope of practice in the more than 40 countries with legislation to recognize and regulate practice, chiropractors are authorized to diagnose and practice as primary care health professionals. As such patients typically consult a chiropractor directly. Even where diagnostic imaging is required most patients are able to commence treatment within 24 hours of a first consultation, often immediately.
- *Ready Access.* The chiropractic profession is now established in over 90 countries. In Europe, North America and an increasing number of other countries chiropractors are found throughout the country and a first appointment can be made within a few days. This compares with the weeks or months of delay that are often experienced for specialist consultations or the availability of physical therapy services. An example of why early access to chiropractic assessment and care is important to patients is found in the recent survey by Busse et al.[17] of orthopedic surgeons in Canada, where it is typical for a patient to wait 3-6 months for surgical consultation

and another 3 months for surgery if necessary. These delays were given as one significant reason that more than 3 out of 4 surgeons approved of a non-medical provider such as a chiropractor assessing whether or not back pain patients being referred to them by a primary care physician really required a surgical consultation.

• *Early Return to Activity.* A prime goal of chiropractic care is to keep patients mobile and, if disabled by spinal pain, to produce earliest possible return to activities of daily living. This, as much as anything, is what has brought the profession its success. There are numerous stories of patients carried in and walking out. Full recovery may take longer and require a course of treatments, advice, and monitoring of progress, but there is quick return to function with patients understanding that residual pain and discomfort may hurt but will not harm.

16. **Nine. Relationship of Spinal Health to General Health.** Spinal health is of major importance to general health, so that a focus on the former gives the profession an important role in management of the latter. Reasons include:

• There is a spinal component in many disorders for many patients, such as asthma, digestive disorders, dysmenorrhea, and referred chest pain often medically diagnosed as angina.

• Back and neck pain and headache need to be managed through a biopsychosocial model that pays attention to psychological and lifestyle factors including exercise, nutrition and positive mental attitudes.

• Disability from spinal pain leads to many comorbidities – including depression, obesity and a range of lifestyle disorders from diabetes to hypertension.

17. **Ten. Professional Consensus.** There is a broad, international consensus on the core identity of chiropractors as primary care experts in spinal health, achieved over more than 10 years of consultation and implementation. It is an identity that is consistent with all philosophical approaches to practice. Plainly it is narrower than the full scope of chiropractic competencies and practice, but that is the nature of a market identity. It is broader than the basic public identification of the profession with back and neck pain only, but not in conflict with that. There is no prospect of an equal chiropractic consensus on any other market identity.

D. Conclusion

Does the chiropractic profession need an adjustment? In one sense yes, as all professions, organizations and individuals do most of the time. Chiropractic is on the evolutionary path from a North American family enterprise, isolated from others in its field of healthcare and with family values such as loyalty to all members whatever they do or say, to a mature, international healthcare profession. That path requires many adjustments, demands sound professional values, and leads to greater integration into the delivery of healthcare and greater patient access to chiropractic services.

In another sense no. It is important during this evolution that the profession maintain its core principles and practice, including the central reliance upon hands-on, skilled spinal manipulative therapy, that have stood the test of time and continue to give the profession its reason for existence. The Palmer College on display at Homecoming last month has made the necessary adjustments but is retaining the core. As the famous Canadian orthopedic surgeon Bill Kirkaldy-Willis, a great friend to the chiropractic profession now departed, used to say "you need two wings to fly – philosophy and science." The Fountainhead is flying. TCR

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